Name: _____

1) What is the positive root of x in the equation $\frac{4}{x-1} = \frac{x+1}{12}$, $x \neq 1$?

A) $\sqrt{7}$ B) 1 C) 7 D) 24

2) Solve for x: $\frac{3}{2x-1} = \frac{1}{3x-5}$

3) Solve: $2x + \frac{5}{2} = \frac{3}{x}$

A) $x = -\frac{3}{4}$ or $x = 2$

B) $x = \frac{4}{3}$ or $x = -2$

C) $\varnothing$

D) $x = \frac{3}{4}$ or $x = -2$

4) Solve: $\frac{7}{x} - 4 = \frac{-4x}{x+1}$

A) $-\frac{3}{7}$ B) $-\frac{7}{3}$ C) $\frac{7}{3}$ D) $\frac{3}{7}$

5) Solve for x: $\frac{1}{x} + \frac{1}{6} = \frac{1}{2}$

6) What is the solution set for $\sqrt{x+11} + 1 = x$?

A) {5} B) { } C) {5, -2} D) {-2}

7) What is the solution set of the equation $\sqrt{x^2 - 3x + 3} = 1$?

A) { } B) {2} C) {1, 2} D) {1}

8) What is the value of y in the equation $\sqrt{y-2} = 5$?

9) Find the solution to the equation $\sqrt{3x+2} - 4 = -6$.

10) Solve for the variable: $\sqrt{7x+4} - \sqrt{2x+29} = 0$

11) Solve the given expression using the quadratic formula. [*Express the answer in simplest radical form.*]

$3x^2 = 2x + 2$

12) Solve the given equation by completing the square. [*Express the answer in simplest radical form if necessary.*]

$y^2 - 4y - 7 = 0$

13) The roots of the equation $x^2 + 6x + 11 = 0$ are

A) imaginary
B) real, rational, and equal
C) real, irrational, and unequal
D) real, rational, and unequal

14) If the discriminant of an equation is 10, then the roots are

A) imaginary
B) real, rational, and equal
C) real, irrational, and unequal
D) real, rational, and unequal

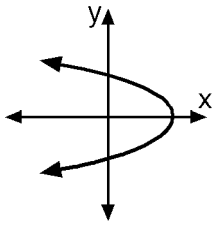
15) The roots of a quadratic equation are real, rational, and equal when the discriminant is

A) 0 B) 2 C) -2 D) 4

16) Which is a true statement about the graph of the equation $y = x^2 - 7x - 60$?

A) It intersects the x-axis in two distinct points that have rational coordinates.
B) It does not intersect the x-axis.
C) It is tangent to the x-axis.
D) It intersects the x-axis in two distinct points that have irrational coordinates.

17) Which diagram could represent the graph of an equation with imaginary roots?

A)


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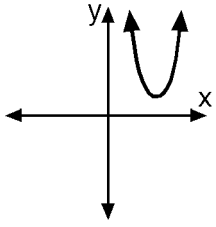
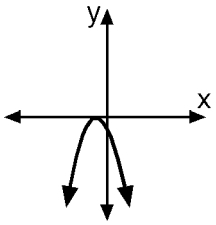


C)


D)